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REMARKS

In the Office Action dated 15 January 2003, claims 1-6, all claims currently pending in this application were rejected (claims 7-9 having been withdrawn). Applicants have amended claim 2 following the Examiner's kind suggestions. Claims 1-6 are submitted for reconsideration, as amended.

Claim 2 had been rejected under 35USC §112 and has been amended, *vide supra*.

Claims 1, 2, 4 and 5 had been rejected under 35 USC §102(b) as being anticipated by Frankosky et al., WO 91/09166 (also U.S. Patent No. 5,064,703). The Office has cited page 5, lines 1-20 and Examples 1-4.

Page 5, lines 1-12 of the reference is explicit in specifying the composition of the hydrophobic layer. Specifically, the recitation includes two different isophthalates (the meta isomer) which are NOT included in Applicants claims, especially claim 2. Applicants use the para-benzene dicarboxylic acid exclusively.

Example 3 of the reference recites a composition for copolyetherester elastomer (B) which is:

20.3% butanediol + terephthalic acid

7.9% butanediol + isophthalic acid

51.7% poly (tetramethylene ether) glycol ($M_w=2000$) + terephthalic acid

20.1% poly (tetramethylene ether) glycol (M_w2000) + isophthalic acid

This is not Applicants' composition as used in the claimed method.

The differences between Applicants' claimed method and the Frankosky et al. reference method are not trivial. Note paragraph [0034] wherein the melting point of Applicants' adhesive is specified as 157°C and a melt viscosity of 400 Pa at 190°C. Bostik 5178 has an mp. of 130°C (see attached) and the equivalent Griltex 6E has a melting range of 125-130°C.

Anticipation cannot be found when the claimed invention and the cited reference use different chemical composition having different properties.

Claim 3 had been rejected under 35 USC §103(a) over Frankosky et al. in view of Mahler, U.S. Patent No. 5,418,044 and Applicants' specification. The distinctions between Applicants' invention and Frankosky et al. have been noted. Mahler stands for the use of an adhesive to glue Sympatex® to a substrate without first coating the film. The example uses polyurethane adhesive. As stated in Applicant's specification, the combination falls apart on washing. Sympatex® cannot be glued directly to a substrate and especially not with an adhesive which violates bluesign® standards,.

Claim 6 has been rejected for the use of known methods for applying adhesives. The claim does not depend for originality on the method of adhesive application.

Claims 1, 2 and 4-6 have been rejected over Horn, U.S. Patent No. 5,447,783 in view of Tanaka et al., U.S. Patent No. 4,130,603, Frankosky or the admitted prior art. Horn is described rightly as a Sympatex® analogue and it has been presumed that any of the Tanaka et al., Frankosky or the other prior art adhesives would be equivalent to the Applicants' claimed adhesive system. The adhesives are described rightly as "conventional" and are indeed the prior art to which Applicants refer in the specification.

Tanaka et al. have been selected as a specific example of the prior art adhesives. Tanaka et al. include a mixture of terephthalates and isophthalates in approximately equal amounts (c.f. Examples 1 and 2) with melting points of 120° (col. 4, line 2), 124, 121 and 127°C (col. 5, table). The comparisons used for testing peel strength bonded cotton to PET (col. 7, line 9-18). These conventional adhesives are not distinguishable from the Bostik 5178 or Griltex EMS 6D2-2. A

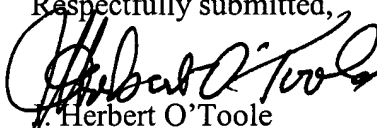
comparable Gritler adhesive is used in Applicants' comparative example to demonstrate failure. The rejection is traversed.

Claim 3 has been rejected over the art cited in the previous rejection (Horn over Tanaka et al.) in further view of Mahler, U.S. Patent No. 5,418,044. Mahler teaches the use of a number of adhesives including polyurethane (Practical Example, col. 6, lines 56-57), copolyesters and copolyamides (col. 5, lines 66-67). Use of such adhesives may be practicable in some instances but is not truly wash resistant and violates the bluesign® concept of total recyclability which forms the basis and objective of this invention.

Claims 1-6 have been rejected over the admitted prior art in view of Horn or Frankosky. This rejection is cumulative and has been traversed previously in the discussion of Horn and Frankosky.

In view of the amendments and remarks above, Applicants submit that this case is in condition for allowance and request reconsideration and favorable action thereon.

Respectfully submitted,



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Enclosure: Bostik specification sheet; Grittex specification sheet; Priority Doc. No. DE 101 09 622.4

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is being deposited with the United States
Postal Service as first class mail in an
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for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: April 15 2011

by: Jacqueline Beavers 

Material	90	82	160,000 @ 180°C	85	Good	Poor	75	1, 2, 3, 4, 5	Low melt
PE75	90	82	160,000 @ 180°C	85	Good	Poor	75	1, 2, 3, 4, 5	Low melt, good elongation
PE85	100	90	150,000 @ 180°C	93	Excellent	Poor	88	1, 2, 3, 4, 5	Low melt, good elongation
PE103	115	105	140,000 @ 215°C	115	Excellent	Fair-Good	105	1, 2, 4, 5	Low melt, good adhesion to ABS
PE105	131	120	125,000 @ 215°C	132	Excellent	Good	120	1, 2, 4, 5	General purpose, automotive
PE120	175	165	140,000 @ 215°C	180	Excellent	Excellent	165	1, 2, 4, 5	Very high temperature resistance
PE165	125	N/A	400,000 @ 180°C	121	Fair	Excellent	127	1, 2, 4, 5, 6	General purpose
PA115	151	N/A	250,000 @ 180°C	143	Fair	Excellent	140	1, 2, 4, 5, 6	Steam activatable, excellent dry clean resistance
PA145	151	N/A	340,000 @ 180°C	163	Good	Excellent	140	1, 2, 4, 5, 6	Dielectric activation, high temperature resistance
PA150	110	N/A	150,000 @ 180°C	115	Good	Poor	86	1, 2, 5, 9	Good performance, economical

6-Metal 7=ABS. 8=PVC. 9=Polyolefin

Code: 1=Wood 2=Paper 3=Leather 4=Urethane Foam.

Powder Form

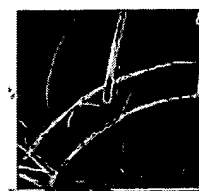
Polymer	Sample No.	Temperature, °C	Tensile strength, 10 ⁸ dynes/cm ²	Elongation, %	Modulus, 10 ⁹ dynes/cm ²	Impact strength, ft.-lb./in.	Volume resistance, ohm-cm	Surface resistance, ohms	Dielectric constant	Dielectric loss	Thermal stability, °C	Chemical stability	General purpose
Copolyester	75	65	100,000 @ 180 °C	65	88	110	55	1, 2, 3, 4, 5	1.2, 3, 4, 5	1.2, 3, 4, 5	105	Low melt	Very low melt
Copolyester	130	124	40,000 @ 215 °C	38	110	110	125	1, 2, 4, 5	1, 2, 4, 5	1, 2, 4, 5	150	General purpose	General purpose
Copolyester	112	90	55,000 @ 215 °C	38	85	85	60	1, 2, 4, 5	1, 2, 4, 5	1, 2, 4, 5	120	Low melt paste grade	Low melt paste grade
Copolyester	115	105	70,000 @ 215 °C	17	121	121	105	1, 2, 4, 5	1, 2, 4, 5	1, 2, 4, 5	150	Low melt	Low melt
Copolyester	155	145	55,000 @ 215 °C	47	154	154	120	1, 2, 4, 5	1, 2, 4, 5	1, 2, 4, 5	120	High temperature resistance	High temperature resistance
Copolyester	130	125	100,000 @ 215 °C	22	127	127	135	1, 2, 4, 5	1, 2, 4, 5	1, 2, 4, 5	135	General purpose	General purpose
Copolyester	138	130	90,000 @ 215 °C	17	123	123	110	1, 2, 3, 4, 5	1, 2, 3, 4, 5	1, 2, 3, 4, 5	110	Excellent adhesion to polyester film	Excellent adhesion to polyester film
Copolyester	120	112	45,000 @ 215 °C	39	115	115	115	1, 2, 3, 4, 5, 8	1, 2, 3, 4, 5, 8	1, 2, 3, 4, 5, 8	115	Excellent wash resistance	Excellent wash resistance
Copolyester	120	115	80,000 @ 215 °C	22	127	127	150	1, 2, 4, 5, 6	1, 2, 4, 5, 6	1, 2, 4, 5, 6	150	Stream activatable, non-fogging	Stream activatable, non-fogging
Copolyamide	160	152	335,000 @ 180 °C	35	145	145	80	1, 2, 3	1, 2, 3	1, 2, 3	80	Low melt; Good adhesion to leather	Low melt; Good adhesion to leather
Copolyamide	90	N/A	5,000 @ 200 °C	251	77	77	145	1, 2, 4, 5, 6	1, 2, 4, 5, 6	1, 2, 4, 5, 6	145	Steam activatable	Steam activatable
Copolyamide	152	145	325,000 @ 180 °C	37	141	141	145	1, 2, 4, 5, 6	1, 2, 4, 5, 6	1, 2, 4, 5, 6	145	Steam activatable	Steam activatable

5-52bHC 6=Metall 7=ABS, 8=PVC

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466
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PRODUCTS

HOTMELT ADHESIVES



COPOLYESTER for Technical Applications			Griltex® EMS
Product	Melting Range DSC [°C]	Melt Viscosity 160 °C/2.16kg ISO 1133 [Pa·s]	Melt Volume Rate 160 °C/2.16kg ISO 1133 [cm ³ /10 min]
<u>6E</u>	125-130	800	13
<u>9E</u>	118-123	350	30
<u>D 1309E</u>	145-155	120 (190°C)	90 (190°C)
<u>D 1365E</u>	98-107	450	23
<u>D 1377E</u>	150-160	300 (190°C)	35 (190°C)
<u>D 1439E</u>	120-130	800	13
<u>D 1441E</u>	120-130	180	60
<u>D 1442E</u>	105-115	650	16
<u>D 1502E</u>	180-190	100 (210°C)	105 (210°C)
<u>D 1519E</u>	120-130	1200	9
<u>D 1531E</u>	75-85	300	35
<u>D 1533E</u>	140-150	30 (190°C)	350 (190°C)
<u>D 1539E</u>	118-123	100	105
<u>D 1582E</u>	75-85	80	130
<u>D 1616E</u>	85-95	1000	11
<u>D 1619E</u>	115-120	1100	10
<u>D 1655E</u>	185-195	40 (210°C)	265 (210°C)

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To Griltex Overview

Griltex 6E**Copolyester Schmelzkleber
Copolyester Hotmelt Adhesive****Technisches Merkblatt
Technical Data Sheet**

Schmelzbereich Melting range	DSC	[°C]	125-130
Schmelzviskosität Mittelwert Melt viscosity average	DIN/ISO 1133 2.16 kg/160 °C	[Pa·s]	800
Schmelzvolumenindex (MVR) Mittelwert Melt volume rate (MVR) average	DIN/ISO 1133 2.16 kg/160 °C	[cm³/10 min]	13
Gravurwalzentemperatur Temperature of engraved rolls	Pulverbeschichtung Powder Coating	[°C]	55-65
Fugentemperatur Glue-line temperature		[°C]	140-170
Druck (pneumatischer Förderdruck in einer Durchlaufpresse) Pressure (pneumatic fusing pressure in a flow-through press)		[N/cm²]	3.0-5.0
Zeit (Presse) Time (Press)		[s]	12-20
Chemische Reinigungsbeständigkeit Resistance to dry cleaning			gut good
Waschbeständigkeit Resistance to laundry		[°C]	75

Alle Messungen wurden an getrocknetem Material durchgeführt.
All measurements have been taken at dried material.

Lieferform/Availability

GF = Granulat (Wassergehalt < 0,5 %) in Papier-/Alu-Säcken à 25 kg
Granules (Water content < 0.5 %) in Paper/Alu bags 25 kg each
P = Pulver (Wassergehalt < 1.0 %) in Papier-/PE-Säcken à 20 kg
Powder (Water content < 1.0 %) in Paper/PE-bags 20 kg each

Die Verpackungen sind stofflich gekennzeichnet und rezyklierbar, siehe Sonderbroschüre
Wrapping materials can be recycled.

Die vorliegenden Daten und Empfehlungen entsprechen dem heutigen Stand unserer Kenntnisse, sind jedoch ohne Verbindlichkeit/All data and recommendations are based on our present knowledge but are given without guarantee

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